

188 11/17 : 5

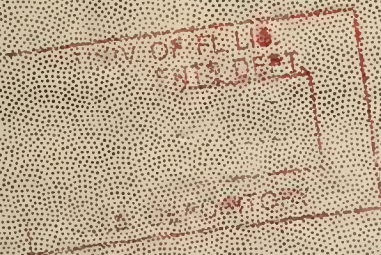
REPORT NO. 5

THE LIBRARY

NOV 08 1976

UNIT OF FIBER

# Cotton Fiber and Processing Test Results



CROP of

1976



Agricultural Marketing Service  
U.S. DEPARTMENT OF AGRICULTURE  
Memphis, Tenn. 38122 November 5, 1976

## COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1976

### Discussion of Test Results

The average fiber length of short staple cotton tested from the Southwest through October 29 is shorter and less uniform than a year ago, according to the Cotton Division, Agricultural Marketing Service, USDA. The average fiber strength is weaker on both zero and 1/8" gage tests. Picker and card waste is higher than a year ago. Yarns spun from these samples show considerably weaker yarn strength and lower appearance grades. Yarn imperfections are higher. The average spinning potential yarn number is lower.

The U. S. average length of medium staple samples is slightly shorter than a year ago at this time. Micronaire and fiber strength are about the same as a year ago. Picker and card waste is higher than last year. Yarns spun from these samples are stronger with higher appearance grades and fewer imperfections.

Southeastern area medium staple samples are slightly longer, more uniform, and coarser than a year ago. Cottons are stronger. Shirley Analyzer nonlint content is slightly higher. Picker and card waste is considerably higher than last season. Yarns spun from these samples show stronger skein strength and higher appearance grades. Yarn imperfections are fewer. The average spinning potential yarn number is higher.

Medium staple samples tested from the South Central area show fibers to be slightly shorter and less uniform than a year ago. Cottons are finer and stronger. Picker and card waste is higher than last year. Yarns spun from these samples show stronger yarn strength and fewer imperfections.

Medium staple samples tested from the Southwest show slightly shorter fibers than a year ago. Picker and card waste is considerably higher. Yarns spun from these samples are slightly stronger with fewer imperfections.

Medium staple samples tested from the West to date show longer, slightly less uniform fibers than a year ago. Samples are weaker at zero gage strength tests. Both Shirley Analyzer nonlint content and picker and card waste are higher than a year ago. Yarns spun from these samples show higher appearance grades and fewer imperfections. The average spinning potential yarn number is higher.

- - - - -

These reports are published bi-weekly during the harvesting season and will be summarized in a comprehensive report at the end of the crop year. A detailed description of the tests shown in this report may be found in the summary report for the previous season.<sup>1/</sup> These reports are available on request from the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, 4841 Summer Avenue, Memphis, TN 38122.

<sup>1/</sup> Summary of Cotton Fiber and Processing Test Results, Crop of 1975, USDA, AMS, Cotton Division, May 1976.



Table i.--Cotton: Averages of fiber and processing tests from selected gin points in the United States  
1/  
through October 29, 1976

Staple group Area, and Crop year	Lots tested	Fiber test results					Processing test results								
		Fibrograph		Mike fine- ness	Fiber strength		S A nonlint	P & C waste	Yarn quality		Spin. Potent.				
		2.5% span	50/2.5 unif.		Pct.	Rdg.			Mpsi	G/tex		Pct.	Skein str.	Appearance	Imperf- actions
				Inches			Pct.	Index			No.				
Short Staple: Southwest 1975 1976	12	1.01	46	4.4	89	22	3.0	5.7	104	116	11	46			
	7	.98	44	4.4	85	20	2.9	6.9	84	111	13	36			
Medium Staple: Southeast 1975 1976	3	1.09	45	4.3	81	22	3.4	5.5	100	100	25	56			
	4	1.10	46	4.8	88	24	3.6	6.7	112	105	23	60			
South Central 1975 1976	32	1.10	46	4.6	86	23	3.0	5.1	101	100	20	57			
	15	1.09	45	4.3	89	24	2.9	5.7	112	101	18	55			
Southwest 1975 1976	21	1.08	45	4.3	81	22	2.9	4.7	103	99	22	58			
	23	1.07	45	4.2	81	22	3.0	6.1	105	99	20	58			
West 1975 1976	5	1.12	46	4.0	95	28	2.0	4.1	129	84	31	73			
	2	1.14	45	4.1	90	28	2.8	5.2	129	90	20	76			
U.S. Average 1975 1976	61	1.10	45	4.4	85	23	2.9	4.9	104	98	22	59			
	44	1.08	45	4.3	85	23	3.0	5.9	109	100	19	58			
Significant dif- ference 2/		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3			

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through October 29, 1976  
1/ (Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results										SPY
		Length		Mike	Strength		SA Non- lint	P&C Waste	Comber Waste	Yarn Quality								
		Span	Unif		Zero gage	1/8" gage				Strength carded	combed	Appearance carded	combed	Imprfctns card	comb			
No.	In.	Pct.	Rdg.	Mpsi	G/tx	Pct.	Pct.	Pct.	Lbs.	Lbs.	Indx	Indx	No.	No.	No.			
Long Staple: Southeast 1975 1976	1	1.15	45	4.1	83	24	2.9	7.7	15.5	106	125	120	120	14	8	71		
	2	1.18	47	4.4	91	26	2.3	5.8	14.4	126	146	105	125	21	9	76		
Significant Difference 2/	0.02	2	0.2	2	1	0.5	0.5	0.5	4(22s)	4(22s)	5	5	2	2	3			

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1976

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns													
No		Grade	Name & Code	Stple	32s'	Digital Fibrograph		Mike	Fiber Strength		Elon- gation 1/8"	S.A. Non- lint		Color Raw Stock		P & C		Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial	
						2.5% span	Unif		Zero Gage	1/8" Gage		Pct	Pct	Gra	Yel	Waste	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx			
SOUTHWEST AREA																											
CENTRAL TEXAS																											
TEMPLE																											
1	SLM	LT	SP	42	32	0.95	47	4.8	89	21	5.8	2.2	3	4	6.7	255	80	5.7	4.8	120	110	21	15	31			
2	SLM	LT	SP	42	31	0.98	45	4.6	87	20	5.9	3.3	3	4	6.9	262	81	6.0	5.1	130	120	20	12	33			
3	SLM	LT	SP	42	31	0.97	44	4.6	87	21	5.8	2.6	3	4	6.3	264	78	5.9	4.8	130	100	17	14	31			
WACO																											
1	LM	LT	SP	52	33	1.08	43	3.8	82	21	6.4	3.8	4	4	6.8	297	97	7.2	5.9	130	110	22	17	49			

1 Reduced from 42 because of bark

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1976

Production Area, Classification				Fiber Test Results										Processing Test Results - Carded Yarns									
Sample Number		Digital Fibrograph	Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfect'ns		Spin. Potential				
No	Grade	2.5% span	Unif.	Zero Gage	1/8" Gage	Pct	Pct	Gra	Yel	Pct	Lbs	Lbs	Pct	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	No			
Name & Code		32s	In	Pct	Rdg	Mpsi	G/tex	Pct		Pct		Pct		Pct		Pct		Pct		No			
SCUTHEAST AREA																					No		
GEORGIA																					No		
ALLENTOWN																					No		
1	LM	51	34	1.08	45	4.8	83	23	COKER 201	6.0	4.4	3	2	7.5	107	36	5.5	4.2	100	70	26	19	58
NORTH CAROLINA																					No		
LAURINBURG																					No		
1	SLM	41	36	1.17	47	4.7	89	26	MCNAIR 612	5.9	4.0	2	2	6.6	129	42	6.0	4.6	100	90	27	21	70
SOUTH CAROLINA																					No		
CHESTER																					No		
1	SLM LT SP	42	34	1.05	45	4.6	89	25	CCKER 417	6.4	3.9	4	4	6.5	115	38	5.6	4.1	120	90	15	11	62
MAYESVILLE																					No		
1	PTD	31	34	1.08	45	5.0	89	23	COKER 201	5.5	2.1	2	3	6.1	99	31	5.2	3.5	100	80	24	20	48
SOUTH CENTRAL AREA																					No		
ARKANSAS																					No		
HUGHES																					No		
1	SLM	41	35	1.11	46	4.5	88	24	STCNEVILLE 213	6.3	2.9	2	2	5.5	111	37	6.0	4.4	90	70	25	19	59
KEISER																					No		
1	SLM	41	36	1.15	44	4.1	87	26	DELTAPINE 16	7.7	2.1	1	2	5.0	122	41	6.6	5.3	90	70	18	15	70
LEACHVILLE																					No		
1	SLM	41	36	1.13	45	4.1	87	24	STCNEVILLE 213	6.6	2.8	2	3	5.8	117	39	6.3	5.7	90	80	20	15	61
LOUISIANA																					No		
LAKE PROVIDENCE																					No		
1	SLM	41	34	1.07	44	4.9	89	23	STONEVILLE 213	5.6	2.3	1	3	6.0	103	31	5.5	3.8	90	70	25	20	52
MISSISSIPPI																					No		
DUCK HILL																					No		
1	SLM	41	34	1.10	45	4.3	86	24	DELTAPINE 16	7.4	2.0	2	3	4.8	107	35	6.0	4.5	120	90	12	9	57
GLENORA																					No		
1	LM	51	34	1.08	46	4.7	92	24	STCNEVILLE 731N	5.5	3.6	1	2	6.2	108	35	5.3	4.0	100	90	13	11	54

1/ Reduced from 41 because of grass

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1976--(Continued)

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns									
No	Grade	Style	32s	In	Pct	Rdg	Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial
								Zero Gage	1/8" Gage			Gra	Yel		Lbs	Pct	Pct	Pct	Lbs	Pct	22s or 27 tx	50s or 12 tx	
SOUTH CENTRAL AREA--(Continued)																							
MISSISSIPPI--(Continued)																							
HOLLANDALE																							
1	SLM	41	34	1.09	42	3.5	88	25	7.3	3.4	1	2	5.8	100 PERCENT	115	37	6.2	4.5	90	70	26	18	63
INDIANOLA																							
1	LM	51	33	1.03	45	4.0	98	24	5.1	4.2	3	2	6.9	100 PERCENT	106	35	5.2	3.8	110	70	15	10	52
INDIANOLA																							
1	LM PLUS	50	34	1.04	47	4.3	93	25	6.0	3.7	2	3	6.7	100 PERCENT	114	37	5.7	4.3	110	90	14	10	58
NATCHEZ																							
1	SLM	41	34	1.07	45	4.3	87	23	6.0	2.5	1	2	5.7	85 PERCENT	105	32	6.0	4.3	100	80	17	12	54
SCOTT																							
1	SLM	41	34	1.12	45	4.4	91	26	7.4	2.0	1	2	4.1	100 PERCENT	121	41	6.4	4.7	110	90	11	9	72
MISSOURI																							
1	SENATH	41	35	1.10	44	3.8	86	24	6.7	2.8	2	3	5.2	100 PERCENT	119	39	6.5	4.4	90	80	24	17	62
SOUTHWEST																							
AREA																							
CENTRAL TEXAS																							
3	SLM	42	34	1.10	46	4.4	81	22	7.1	2.5	2	3	6.1	90 PERCENT	101	32	6.1	4.4	100	70	24	16	54
BATESVILLE																							
AREA																							
WEST																							
CALIFORNIA																							
1	SLM	41	36	1.13	45	4.0	88	27	6.7	3.3	1	3	5.5	99 PERCENT	125	44	5.7	4.7	90	70	22	19	74
BAKERSFIELD																							
1	SLM	41	36	1.14	45	4.2	93	29	6.3	2.4	2	2	4.8	98 PERCENT	133	48	5.6	4.7	90	80	21	17	77
BAKERSFIELD																							

2/ Cotton stuck to processing rolls



Table 4 --Cotton, American upland long staple: Quality characteristics by production areas, crop of 1976

Production Area, Classification & Sample Number				Fiber Test Results										Processing Test Results - Carded Yarns										
No	Grade	Name & Code	Stple	Digital Fibrograph		Mike	Fiber Strength		Elon- gat'n 1/8"	S.A. Non- Lint	Color Raw Stock		P & C and Comber Waste	Strength		Elongation		Appearance Index		Imprfct'ns		Spin. Poten- tial		
				2.5% span	Unif.		Zero Gage	1/8" Gage			Gra	Yel		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	No	No			
				In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No		
SOUTHEAST AREA																								
NORTH CAROLINA																								
DUNN				100 PERCENT																			77	
1 SLM				41	36	1.18	48	4.6	92	COKER 310	6.6	1.8	2	3	5.7	127	46	5.8	4.6	110	100	14	10	
													*	13.6	148	53	6.5	5.2	130	110	6	3		
SOUTH CAROLINA																								
HARTSVILLE				100 PERCENT																			75	
1 SLM				41	36	1.19	46	4.3	90	COKER 310	6.6	2.8	1	3	5.9	125	44	5.9	4.6	100	80	28	17	
													*	15.3	144	52	6.3	4.9	120	100	12	11		

\* Comber Waste and Combed Yarn Data

